

In response to the Office Action dated July 24, 2001 in the above-identified patent application, the deadline for response to which has been extended one month, to November 26, 2001 (in light of the fact that November 24, 2001 is a Saturday), by the petition for extension of time set out hereinafter in the "Remarks" section hereof, please amend the application as follows:

In the Claims

Cancel claims 56-60.

Please amend claims 40 and 52-55, as follows:¹

- C Sub D
40. (amended) A microelectronic device structure including a top electrode layer on a top surface of a ferroelectric oxide or high ϵ oxide film material, wherein said ferroelectric oxide or high ϵ oxide film material is stoichiometrically complete in oxygen content throughout, including the top surface region of the ferroelectric oxide or high ϵ oxide film material; and wherein the top electrode layer does not contain oxygen abstracted from the thin film of ferroelectric or high ϵ material underneath.
- C Sub E6
52. (amended) A microelectronic device structure according to claim 40, wherein the top electrode is formed in an oxygen-enriched environment.
53. (amended) A microelectronic device structure according to claim 40, wherein said top electrode is formed of a metallic non-oxide material by sputtering in the presence of oxygen.
54. (amended) A microelectronic device structure according to claim 40, wherein said top electrode is formed of a noble metal that is formed by evaporation of a noble metal source material in the presence of oxygen.
55. (amended) A microelectronic device structure according to claim 40, wherein the top electrode layer is formed of a noble metal by a chemical vapor deposition process that incorporates oxygen.

¹ Consistent with the requirements of 37 C.F.R. §1.121, a marked up version of the amended claims is contained in Appendix A hereof; a clean copy of all pending claims is contained in Appendix B hereof.

Add new claims 61-63, as follows:

- Sub E1
61. (new) A microelectronic device structure according to claim 40, wherein said top electrode layer comprises Rh.
62. (new) A microelectronic device structure according to claim 40, wherein said top electrode layer comprises a Rh oxide material.
- C3
63. (new) A ferroelectric or high ϵ capacitor comprising:
- Sub D2
- a bottom electrode layer formed of a material selected from the group consisting of Ir, Ir oxide, Rh, Rh oxides, and compatible mixtures and alloys thereof;
- a thin film of a ferroelectric or high ϵ material over the bottom electrode, wherein the material is stoichiometrically satisfied in oxygen content throughout, including the surface region of the material adjacent to the top electrode layer;
- a top electrode layer on the thin film of ferroelectric or high ϵ material, which is formed of a material selected from the group consisting of Ir, Ir oxide, Rh, Rh oxides and compatible mixtures and alloys thereof,
- wherein
- ~~the top electrode layer does not contain oxygen content abstracted from the thin film of ferroelectric or high ϵ material underneath.~~

REMARKS

Petition for One-Month Extension of Time Under Provisions of 37 CFR §1.136

A petition for a one month extension of time hereby is made under the provisions of 37 CFR §1.136, extending the term for response to the July 24, 2001 Office Action from October 24, 2001 to November 26, 2001, which is the first Monday subsequent to Saturday, November 24, 2001.